

## **REMARKS**

Claims 11-14, 16-19 and 24-30 are now pending in the application. Claims 11-19 and 24-28 stand rejected. Claims 11 and 24-27 are amended. Claim 15 is cancelled. Claims 29 and 30 are added. Support for the amendments and additions can be found at claim 15 as originally filed and at paragraphs 34-38. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

### **FINALITY OF THE REJECTION**

The Examiner states that claim 15 is rejected as unpatentable over the teachings of Lai, but fails to point out where Lai teaches the subject matter recited in claim 15. Therefore, on at least these grounds, Applicants respectfully request the Examiner withdraw the Finality of the rejection.

### **REJECTION UNDER 35 U.S.C. § 112**

Claims 24-27 stand rejected under 35 U.S.C. § 112, first paragraph. This rejection is respectfully traversed.

Applicants previously pointed out support for claims 24-27 at paragraph 34 of the originally filed specification. For example, paragraph 34 states in relevant part, "A pitch size around two microns works well with the 10-micron laser spot." Therefore, there is support in the specification for tool pitch being no more than twenty percent of average spot size. It necessarily follows that there is support in the specification for tool pitch being no more than thirty percent of average spot size, no more than forty percent of average spot size, and no more than fifty percent of average spot size.

Accordingly, Applicants respectfully request the examiner reconsider and withdraw the rejection of claims 24-27 under 35 U.S.C. § 112, first paragraph.

**REJECTION UNDER 35 U.S.C. § 103**

Claims 11, 12, 15-19 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lai (U.S. Pat. No. 6,231,566). This rejection is respectfully traversed.

The teachings of Lai are generally directed toward laser beam control to accomplish surface ablation. In particular, the Examiner relies on Lai to teach a tool path of concentric rings with equal spacing between ablations in a ring, and uniform decrease in radius between rings. For example, column 2, lines 26-27 of Lai state, "The diameters of the rings are uniformly increased or decreased in each layer". But the Examiner appears to consider it obvious to increase or decrease radius in a layer non-uniformly where Lai teaches increasing or decreasing radius non-uniformly from one layer to the next. But Lai specifically teaches away from non-uniformly increasing or decreasing the diameter of the rings in each layer. Moreover, there is no teaching suggestion, or motivation for continuously modifying angular velocity as a function of continuously changing radius, thereby accomplishing a continuously constant arc speed.

Applicants' claimed invention is generally directed toward a constant tool path algorithm. In particular, Applicants' claimed invention is directed toward a continuous spiral tool path achieved by application of a laser according to a non-uniformly changing radius and angular progression during a spiral. For example, independent claim 11 of Applicant's claimed invention recites "continuously modify angular velocity as a function of the continuously changing radius, thereby accomplishing the continuously constant

arc speed.”. An example of a resulting tool path is illustrated in Figures 3A and 3B of the originally filed specification. Accordingly, Lai does not teach, suggest, or motivate all of the elements recited in independent claim 11.

Applicants respectfully request that the Examiner withdraw the rejection of independent claim 11 under 35 U.S.C. §103(a), along with rejection on these grounds of all claims dependent therefrom.

Claims 13, 14, and 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lai (U.S. Pat. No. 6,231,566) in view of Cutler et al. (U.S. Pat. No. 5,798,927). This rejection is respectfully traversed.

For discussion of the differences between Applicants' claimed invention and the teachings of Lai, Applicants respectfully direct the Examiner's attention to remarks detailed above with respect to rejection of independent claim 11.

The teachings of Cutler et al. are generally directed toward a laser controller coordinating movements of stages in a multi-rate positioner system. In particular, the Examiner relies on Cutler et al. to teach a piezoelectric transducer as a scanning device that controls repetition rate and spot size and positioning by variation of applied voltage. However, Lai and Cutler et al. do not teach, suggest, or motivate continuously modifying angular velocity as a function of continuously changing radius, thereby accomplishing a continuously constant arc speed. These differences are significant.

Accordingly, Applicants respectfully request the Examiner withdraw the rejection of claims 13, 14, and 24-27 under 35 U.S.C. § 103(a) in view of their dependence from an allowable base claim.

### NEW CLAIMS

Claims 29 and 30 are added. Support for the added claims may be found in the specification as originally filed at paragraphs 34-38. Each of claims 29 and 30 depend directly from allowable base claim 11 and should be allowed for the same reasons.

### CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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